

# WHAT IS THE ROLE OF THE BOARD FOR GEOLOGISTS AND GEOPHYSICISTS?

## MISSION

The mission of the Board of Registration for Geologists and Geophysicists is to continually enhance the quality, value and availability of geological and geophysical services to the people of the State of California.

## THE BOARD

- Protects the health, safety and welfare of the public by testing and licensing geologists and geophysicists.
- Deters negligent, incompetent and fraudulent practices through licensure, regulation and disciplinary action.
- Provides the public with information concerning disciplinary actions against geologists or geophysicists it may hire.



**ANYONE WHO OFFERS TO PRACTICE OR PRACTICES GEOLOGY OR GEOPHYSICS FOR THE PUBLIC IN CALIFORNIA MUST BE LICENSED AS A GEOLOGIST OR GEOPHYSICIST.**

# QUESTIONS ABOUT LICENSING REQUIREMENTS AND THE EXAMINATION

## FOR INFORMATION ABOUT:

- Professional Geophysicist Examination
- Requirements for Licensure as a Geophysicist
- Examinations for Licensure as a Registered Geologist, Certified Engineering Geologist or Certified Hydrogeologist

## PLEASE CONTACT THE BOARD AT:

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# STUDENT GUIDE TO GEOPHYSICAL LICENSURE IN CALIFORNIA

## CALIFORNIA BOARD FOR GEOLOGISTS AND GEOPHYSICISTS



**An introduction to the three steps to licensure as a Professional Geophysicist in California:**

**EDUCATION**

**EXPERIENCE**

**EXAMINATION**

## **EDUCATION**

To qualify to take the Professional Geophysicist examination, an applicant must graduate with a major in geophysical-related sciences **or** complete 30 semester units in courses that in the opinion of the Board are relevant to geophysics. At least 24 of the 30 units must be upper division or graduate courses.

### **ACADEMIC SUBJECT AREAS**

The Board considers the following subject areas to be essential to the geophysical profession and to best prepare students to take the licensing examination. The Board also considers these subject areas to provide a solid foundation for any specialty in the field of geophysics.

- **INTRODUCTORY PHYSICS**  
*(For science majors)*
- **CALCULUS/DIFFERENTIAL EQUATIONS**  
*(For science majors)*
- **INTRODUCTORY GEOPHYSICS**  
**Field Geophysics**  
**Surveying**
- **GEOPHYSICAL METHODS**  
**Seismic**  
**Electrical**  
**Electromagnetic**  
**Magnetic**  
**Gravity**  
**Acoustic Wave Theory**  
**Interpretation Theory**
- **DATA ACQUISITION**
- **DATA PROCESSING**
- **NUMERICAL ANALYSIS**

- **PHYSICAL GEOLOGY**  
**Stratigraphy**  
**Field Geology**
- **ENGINEERING**  
**Soil Mechanics**
- **ADDITIONAL COURSES**  
**Structural Geology**  
**Groundwater**  
**Matrix Algebra**  
**Vector and Tensor Analysis**

## **EXPERIENCE**

### **PROFESSIONAL EXPERIENCE**

Applicants must have the following combined academic experience and professional geophysical work:

<b>EDUCATION</b>	<b>PROFESSIONAL GEOPHYSICAL WORK</b>
<b>No Degree</b>	<b>7 Years</b>
<b>BS/BA</b>	<b>5 Years</b>
<b>MS/MA+</b>	<b>3 Years</b>

If professional geophysical work is not gained under the supervision of a Professional Geophysicist, then the applicant must have a minimum of five years' experience in a responsible position. Unlicensed practice of geophysics will not be recognized as qualifying experience for registration. See section 3003(e), California Code of Regulations, for a definition of professional geophysical work.

### **RESPONSIBLE POSITION**

Responsible position means a position whereby a person having individual control and direction of a geophysical project exercises individual initiative, skill and judgment in the investigation and

interpretation of geophysical information or the supervision of such projects.

## **EXAMINATION**

The Professional Geophysicist examination is designed to test the applicant's geophysical knowledge acquired through education and experience. The examination will encompass all aspects of the practice of applied geophysics. The examination consists of eight open-ended problems and 100 multiple-choice questions.

### **OPEN-ENDED PROBLEM TOPICS:**

- Intersection of planes
- Scales for determining the magnitude, size, etc. of an earthquake
- Interpreting data from a simple refraction/reflection seismic survey
- Analysis of magnetic, gravity and electrical resistivity exploration data
- Seismic refraction/reflection acquisition methods
- Interpretation of borehole geophysical logs

### **MULTIPLE-CHOICE QUESTION TOPICS:**

- 75% - Geophysical survey theories, seismicity, earthquakes, general geology and natural resources
- 20% - Investigative methods for field investigations and geophysical survey design, interpretation and selection of appropriate geophysical instruments for given situations
- 5% - Knowledge of federal, California state and local laws and regulations that apply to geophysical investigations.

### **ELIGIBILITY**

The Board will evaluate each applicant's education and experience. If the application is approved, the applicant will be scheduled for the next regularly scheduled examination.